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## IN THE CLAIMS

- (currently amended) An electronic toothbrush comprising:
- a brush head portion having a bristle portion, to be inserted into an oral cavity for washing teeth; and
  - a holder portion to be exposed outside the oral cavity;
- an n-type semiconductor which is formed of TiO2 and to receive receives external light; and
- a solar battery electrically connected to said n-type semiconductor, said solar battery having an out put more than 0.5 and less than 3.0V and to superimpose superimposing an electrical potential on the n-type semiconductor in order to synergically enhance a photocatalytic effect of the n-type semiconductor semiconductor, being connected only to the n-type semiconductor.
  - 2. (cancelled)
  - 3. (cancelled)
- 4. (previously presented) The electronic toothbrush according to claim 2, wherein the TiO<sub>2</sub> is an anatase-type crystal.
  - 5. (cancelled)

- 6. (currently amended) An electronic brush comprising:
- a brush head portion having a bristle portion; wherein

an n-type semiconductor which is formed of TiO2 and to receive receives external light; and

a solar battery having an out put more than 0.5 and less than 3.0V, connected only to the n-type semiconductor such that the n-type semiconductor is electrically connected to a negative pole of the solar battery, and to superimpose superimposes an electrical potential on the n-type semiconductor in order to synergically enhance a photocatalytic effect of the n-type semiconductor semiconductor, being connected only to the n-type semiconductor.

- 7. (cancelled)
- 8. (cancelled)
- 9. (cancelled)
- 10. (previously presented) The electronic brush according to claim 7, wherein the battery is embedded in a holder portion following the brush head portion, while the TiO<sub>2</sub> is attached in the vicinity of the brush head protein, and these battery and the TiO<sub>2</sub> are made conductive via a conductive line.